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ABSTRACT

Influencing the future structure and content of the world's educational systems are: (1) physical constraints; (2) demographic constraints; (3) social structure constraints; (4) economic constraints; (5) employment constraints; (6) financial constraints; (7) political constraints; (8) administration and management constraints; and (9) institutional constraints. Analysis of projected constraints in these areas results in proposals to meet future needs and problems. Reconciliation must be made between the school and other educational institutions (family, media, etc.), and among the school, politics, and the community. Schools should adapt to new societal conditions. Educational programs must transform attitudes to foster the conservation of irreplaceable resources and ecological needs. Developing nations, undertaking universalization of primary education, must make efforts to strike a balance between quantitative expansion and qualitative improvement of education systems. To counter adverse effects of increasing urbanization, education will have to emphasize individual spontaneity, imagination, creativity, and moral and spiritual values of collectivity, and education must further accentuate the value of tolerance toward cultural differences. Schools must develop capacity for responsible participation in public life, ensure equal opportunity in education, and must be aware of the choice between mass education and the education of an intellectual elite. Developing nations will have to formulate scientific and technological policies more systematically, devote more resources to research, and collaborate, to a greater extent, with other countries. (JD)

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INTERNATIONAL SYMPOSIUM ON THE EVOLUTION OF
THE CONTENT OF GENERAL EDUCATION OVER THE
NEXT TWO DECADES

Some comments on the socio-economic context of development and its influence on the evolution of content of education during the next two decades

Note: The views expressed are those of the authors, not necessarily those of Unesco, and do not commit the Organization.

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June 1980

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SUMMARY OF STUDY

ESSENTIAL DATA REGARDING THE WORLD SITUATION OVER THE NEXT TWO DECADES

1. Instead of a "future without surprises" approach or a critical approach discounting any basic change in the system of values and social, political and economic structures, the present document adopts a "crisis approach" based on a forecast of considerable imbalances in all aspects of human life. Such imbalances will create constraints which will weigh heavily on the future of education. Obviously, there can be no question of forecasting only one possible development, but possible futures, each of which gives rise to its own problems, appropriate solutions to which must henceforth be sought.

2. Demographic constraints have different effects in developed regions and in the developing regions of the world. Whereas the former will undergo a rate of population increase varying between 0.4 and 0.9% and tending towards zero, the populations of the latter will continue to increase at between 2.5 and 2.9% per annum. As regards the population of school age, there has been a considerable reduction in the developed counties at the very time when the developing countries are confronted with a vast influx of pupils, reinforced by the widespread aspiration for social mobility. In the case of the latter countries,

maintaining a balance between the quantity and quality of the teaching provided is becoming increasingly difficult. To give an overall picture of what these countries have to achieve by the end of the century, it is sufficient to remember that, in 1975, the total number of pupils at all levels of education in the three developing continents (Asia, Africa and Latin America) was about 346 million. According to Unesco and ICED forecasts, these same continents will have to register a total of 763 million pupils in the year 2000, or 2.2 times as much as the figure reached a quarter of a century earlier!

3. The increase of world population at a rate of 77% between 1970 and the year 2000 (according to an average forecast variant), will obviously give rise to considerable problems in relation to food supplies and physical resources of all kinds. Although at present there is no suggestion that the physical limits of increase at world scale will be reached, there is no doubt that the insufficiency of raw materials, energy, foodstuffs and other resources at regional or national level may weigh heavily on the populations concerned.

Education will be required to pay increased attention to ecological ethics, to an awareness of and the necessity for conserving non-renewable resources and economising resources in short supply. The promotion of agriculture, which if left undeveloped may cause irreparable harm to the countries of the Third World over the next few years,

will henceforth be one of the priority objectives of systems of education and training in the countries concerned.

4. A third type of constraints are those of an economic nature. After thirty years (1945-1975) of almost uninterrupted growth at rates rarely achieved in the past (Fourastié speaks of the thirty glorious years in the case of his own country, France, a description that could well be applied to other industrialised countries), the world economy is beginning to undergo a long period of recession accompanied by the phenomenon of widespread unemployment. We now know that it it no use counting on rapid economic growth in the industrialized countries over the next two decades, any more than in the majority of the Third World, with the possible exception of certain oil-producing ccuntries. The rate of growth will, therefore, be moderate and will even tend, in some countries, towards zero. It will probably be accompanied by a deterioration in the unemployment problem, which has now become a structural fact, although the recessional tendency which has appeared, cannot eliminate the inflationary movement, which too has become a permanent feature of the world economy.

The stagnation of the world economy could have a number of effects in the educational world, including a review of the priority which has hitherto, if not always, been accorded, in theory if not in fact, to the connection between education and employment.

5. This economic situation will very probably give rise to financial constraints on the development of education and, at the same time, will confront educational systems with

the problems of fustration which frequently occur on the labour market. By the nature of things, therefore, the educational systems will be forced to resort to more cost-effective forms and methods of education (including various non-formal, and perhaps even informal, methods) and to the mobilization of new resources such as direct contributions by local communities in the context of participation.

6. In the social and political fields, researchers foresee an increase in the division of societies, not on the basis of rich and poor, but as a result of ethnical, linguistic, cultural and other differences. The world of tomorrow will thus be a universe made up of diversities, tensions and conflicts. It has to be admitted that an increased rigidity of the central power in the face of such a threat would not be the best solution. A more constructive one would be to render the political and administrative structures more flexible and provide real opportunities for active and responsible participation in decision-making to the populations concerned. In the face of the increasing complexity of these situations, the control of the affairs of peripheral regions from a single centre becomes practically impossible. This is not the opinion of those who foresee that "If humanity, or at least a majority of countries, should enter upon a period of widespread instability and insecurity - which would seem to be the case - we would have to expect

far-reaching changes in human relations. In their search for greater stability, social systems would very likely have a tendency to become more rigid. For education this would mean a return to more authoritarian systems of teaching in a general way, to more rigid structures".(a)

It appears that the ineluctable trends for the next few decades will be increased "democratization" of teaching methods and relations between teachers and pupils, teachers and administrators, and administrators and parents, and also greater flexibility of educational structures so that they are better adapted to the conditions and requirements of individuals, groups and regions.

Although in all countries of the world education is increasingly losing its former élitist character, there still remains much to be done in ensuring equal opportunities for access to and success in this sector. The countries of the Third World will have to pay particular attention to the elimination of educational discrimination between the sexes, social classes, regions, and so on in order to respond to the aspirations of the "unfavoured minorities" and thus ensure more stability in their society.

7. Theconstraints exerted on the educational world do not always come from outside. The school as an institution still exerts pressure in some countries with the aim of retaining the monopoly it enjoyed for several decades.

(a) Charles Hummel: "Education today for the world of tomorrow" Unesco, 1977, page 183

And yet, there is no doubt that the school can no longer respond to all the hopes which were placed on it. Since it is the subject of increasingly violent criticisms, it will have to entrust some of its attributions to other education institutions and endeavour at the same time to coordinate their activities with its own. The school of the 80s and 90s will be thus more open to the community and play a more important part in long-life and iterative educations projects; it will be better adapted to the various types of non-formal education. Less reliance will be placed on the school for training individuals with a view to specific jobs; this task will be entrusted to a supplementary form of training provided later, either before or during employment.

INTRODUCTION

At a meeting devoted to the study of long-term prospects for the content of education, it is normal for the educators to attach more importance to the internal dynamism of education systems, whereas social science researchers, sociologists, economists and others first consider education in its socio-political and economic context, with the aim of analysing and specifying the external influences and constraints exerted on the educational sub-system and, consequently, the margin of autonomy available to the educators.(1)

It is obviously not my intention in the present memorandum to cast doubts on the validity of the educators' approach which, in my opinion, is complementary to that of the social science experts. I would, however, like to lay particular emphasis on the economic and socio-political context within which the evolution of the educational content will take place. I shall do so by indicating the prevalent trends of an economic, social and demographic nature which are liable to influence such evolution.

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1. Charles Hummel, author of "Education today for the world of tomorrow" (Unesco , 1977) wrote: "The future of education depends more on external factors than on endogenous elements in education systems. The political, economic, social and cultural circumstances will determine the education of tomorrow, as they do today" (185-6).

If we look at the history of forecasting (2), we can distinguish three trends which more or less succeeded one another.

The first consisted of foretelling the future on the basis of long-term trends noted in the past or present.

The second was marked by an acute awareness of the limits of growth (physical and demographic limits, pollution of the environment and so on).

The third, which is much more recent, takes the form of presenting various possible patterns of evolution (Bertrand de Jouvenel calls them "futuribles") of the phenomena (demographic, economic, political, social, cultural etc.), of the problems which could be raised by each pattern and of the solutions which might be applied to them.

The majority of forecasts which took place during the 70s fall under this last heading. Some of them based their findings on various models of future society, such as the neo-capitalist, post-industrial society, the welfare state, the socialist society based on authoritatian planning and

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(2) The "pre-history" of forecasting was marked by prophetic, Utopian and philosophical trends. For the present memorandum we shall confine ourselves to the "scientific period" of futurology.

the liberally orientated socialist society based on semi-direct, participative democracy.(3) On the basis of each moedl, the characteristics of the various institutions, such as the educational system and its future evolution were described in great detail.

No matter how adventageous such an approach may be, it cannot be adopted for the present note for the simple reason that it is impossible to say with certainty which is the type of society which will emerge in such and such a part of the world. Another method is to deal with the problem from the point of view not of the future pattern of society but of the type of evolution which can be expected over the coming decades.

In this connection, it is possible to adopt one of three somewhat different points of view:

(a) The conservative point of view which presumes that the future holds surprises, as if the future were more or less the prolongation and continuation of the present;

(b) The reformist or liberal point of view based on the "approaching crisis", which does not in the least ignore the obstacles and interruptions which might occur on the way to the development of society;

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(3) See two works of the European Cultural Foundation: L'éducation a-t-elle un avenir? (1975) and L'éducation Créatrice (1975).

(c) The revolutionary or radical point of view which accepts a critical approach assuring a fundamental change in the system of values, political structures and the economic organisation of societies [4].

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(4) As an example of the first approach there are the works of H. Kahn on the year 2000 and the future ofthe world. The Rome Club has published a numbersof works dealing with the approaching crisis. As an example of the critical approach, we might quote Reich's work The Greening of America (1971), Roszak's: La contre-culture (1969) and those of the neo-Marxists, neo-Rousseauists, etc. For a distinction between these different approaches, see European Cultural Federation: L'éducation a-t-elle un avenir? (1975) and S.Cole et al.: Scenarios of World Development in Futuribles, May-June 1978. The latter article contains a typology of the diagnosis and forecasts of 16 well-known authors of forecasts. The amjority of them refer to the first two types of futurology (the "futures without surprises" and the "future of crisis" approaches).

Forecasts can also be classified according to the social sub-system which the emphasise (economic, social, political, cultural, etc.) and in this connection the importance attached by forecasts carried out in the socialist countries of Europe to the scientific and technological revolution should be remembered, since its repercussions on the rpoductive forces is the decisive factor in transforming society generally.

In view of this diversity of viewpoints, I thought it reasonable to begin with a few facts and trends already discernible, which might be considered as "harbingers of the future", without necessarily sticking to the dogma of a linear evolution of history. For the fluctuations, perturbations and upheavals of all sorts which we call crises are so frequent at present that they might be considered as forming part of the daily facts of our collective life. In this connection, it suffices to remember the major crises which have occurred, particularly over the past ten years, all in spheres of human activity - economic crises such as recessions and world-wide inflation, the unprecedented rise in the price of energy and certain raw materials, the monetary crisis, political crises, such as the political instability noted in several regoins of the world, limited cases of military intervention, the trend towards division in a number of states, etc., social and inter-group relation crises reflected in movements for linguistic and ethnic autonomy, and lastly, cultural

crises, such as the increase of counter-culture among young people and the rejection of Western patterns of culture by part of the Third World.

The general climate of the world to come as described above, appears to give rise to a number of constraints which will weigh heavily on the evolution of educational systems, their structure and their content. The task we have undertaken in the present document is to select some of these constraints and consider what effect if any they may have on the world of education. We shall consider 9 sorts of constraint successively:

(1) physical constraints;

(2) demographical constraints;

(3) constraints arising from social structures (urbanization, modernization and rural development, relations between groups);

(4) economic constraints;

(5) employment constraints;

(6) financial constraints;

(7) political constraints;

(8) administrative and managerial constraints;

(9) institutional constraints (the school being considered as an institution).

1. Physical constraints:

1.1 Since the first Rome Club book was published (Meadows et al: Halt to Growth, 1972), the researchers have not stopped talking about the inevitable depletion of the natural resources of the world during the next few decades if the present constantly increasing pattern of consumption continues (5).

True enough, Halt to Growth was not received in the same way by optimists and pessimists, by those in favour of the "consumer society" and those against, by developed countries and those of the Third World. It is also true that different dates for the total depletion of one resource or another are given by different authors. However, an awareness of environmental constraints is now shared by all, as a result of which the part played by education is seen in relation to this truth, which is henceforth considered as evident.

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(5) W.Léontief and his colleagues wrote: "despite a more rational and more economical technology in the use of raw materials, the whole world will consume three to four times as much of them during the last thirty years of the twentieth century than it has done since the dawn of civilisation." (Original not available. Translated by the translator).

Generally speaking, physical constraints will be less evident in the next two decades, according to forecasts by specialists (6). But that does not mean to say that there will be no serious problems at national or regional level regarding supplies of raw materials, energy, foodstuffs, etc., to meet the needs of the expanding population. Physical constraints, then, will be felt differently in different parts of the world. It would appear, however, that even the most favoured nations ought to take note immediately of these constraints which will become evident sooner or later and adapt their plans and programmes, including those related to education, to such an eventuality.

1.2 In various forecasts, emphasis has been laid on the different aspects of the role of education in face of physical constraints. According to Bertrand Schwartz "Education Tomorrow, the educational system should enlighten the consumer of the future regarding his choice. Other recommend that a considerably modified pattern of consumption at about the level of essential needs be inculcated into the younger generation. The United Nations Programme for the Environment (UNPE) and Unesco have insisted, since the 1972 Stockholm Conference on the Environment, on the necessity for training more ecologists and making the broad masses of pupils aware of ecological problems (7).

Footnotes: See following page

(6) See OECD: Interfutures, facing the future (1979) and UNO: 1999, the expertise of W.Léontief.
The authors of the first work write, however, that "this reassuring diagnosis by no means rules out the emergency during that period, of problems due to constraints of physical availability, economic and social constraints, and

(7) Among authors who have emphasised the ecological aspect, there are Ehrlich (1970), Meadows (1972) and Schumacher (1973). In France, reference can be made to the two works by Philippe Saint-Marc: Socialisation de la Nature (1975) and Progrès ou declin de l'homme? (1978)

According to W.W.Harman[8], the world needs a revolution of ideas in order to face the scientific and technological revolution which dominates it. Such a revolution could be based on two philosophies - the ecological philosophy and that related to the evolution of the human personality (self-realization). So far as the first is concerned, it recognizes the limited nature of the resources available. With regard to the second, it is worth while remembering Maslow's theory, according to which the more progress there is, the further we get away from the elementary needs of survival and security and the closer to loftier requirements in the field of social consideration and evolution of the personality.

1.3 We should not forget, however, that the need for survival will still remain the fundamental requirement in the majority of the world for decades to come. FAO surveys have already revealed the danger of famine which threatens a number of developing countries. It is therefore not without cause that there is a renewal of interest in the agricultural sector and in agricultural training in many countries. This trend may well increase over the next two decades.

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(8) Author of: An incomplete guide to the future (1976)

2. Demographical constraints

2.1 Population increase On the basis of past world population trends, and taking into consideration the drop in fertility, birth-rate and death-rate which varies in degree from developing to developed countries, population experts have arrived at the conclusion that, on the hypothesis of an "average" population growth, world population will increase by 77% between 1970 and the year 2000, the rate of growth being 99% for developing countries over 26% only for developed countries. (9).

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(9) See article by Julien Condé in the OECD publication: "Planning for growing populations".

RATE OF POPULATION GROWTH IN DIFFERENT REGIONS OF THE WORLD BETWEEN 1970 AND 2000

(average hypothesis)

AFRICA	LATIN AMERICA	NORTH AMERICA	EASTERN ASIA	SOUTHERN ASIA	EUROPE	OCEANIA	USSR
137%	110%	11%	48%	115%	18%	74%	32%

The annual rates of growth corresponding to the total growths quoted above are low in the industrialized countries (0.4% for North America, 0.6% for Europe and 0.9% for the USSR) but fairly high in the three development regions of the world, i.e., Africa, Southern Asia and Latin America, where the rates in questi question are about 2.9, 2.6 and 2.5% respectively. The United Nations forecasts do not differ widely from those of the OECD. According to a recent document (10), if we accept an average variant, the annual rates of gr growth of the population of Africa, Latin America and Southern Asia will be 2.8, 2.6 and 2.4 respectively between 1975 and 2000, and the overall rate of growth for the less developed regions will be 2.2% as against 0. 0.70% for the more developed regions.

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(10) Concise report on the world population situation in 1977, new beginnings and uncertain ends, 1979.

2.2 Impact on educational systems

Obviously, population changes only make their effects felt after a number of years. The recent period has been marked by developed which differ according to country country:

(a) In the industrialized countries, the exceptionally rapid fall in the birth rate has already a reduction in the school-going population, which is bound to have an effect at all levels of education. This fall in numbers is only partially offset by an increase of town populations at the expense of rural areas and is already beginning to make its consequences felt.

(b) In the developing counties on the other hand, the effe effect of the more rapid reduction of the death rate rather than of the birth rate has been that the population continues to increase at a relatively rapid rate.

It may be concluded from the above that the rejuvenation of the population of the developing world will continue for a number if decades whereas the population of the developed countries ages increasingly. This last development had already involved the closing of a considerable number of classes and a decrease in the number of students in teacher training colleges.

Unesco's annual statistics are significant in this respect (11). For example, it is noted that the rate of growth of the number attending primary school in North America was 2.1% per annum between 1960 and 1965, whereas this rate fell to - 1.3% per annum between 1975 and 1980. For the same country the rate of growth of the numbers attending secondary school fell from + 5.3% to - 2%, and that in respect of advanced education from 9.3 to 2.3% for the same periods. The rates of annual growth for Europe are given in the following table:

RATE OF INCREASE IN SCHOOL ATTENDANCE

EUROPEAN REGION

	Primary	Secondary	Advanced
Period 1960-1965	+ 1.1	+ 4.8	+ 8.6
Period 1975-1980	- 0.7	+ 1.8	+ 3.3

On the other hand, developing countries generally (though it must be admitted with certain exceptions) should continue to be subjected to a very high population pressure at school age level, which would be reinforced by the effect of an increased and more widespread demand for education.

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(11) See: Trends and projections of enrolment by level of education and by age, December 1978

2.3 Evolution of scolarity at primary level

According to figures supplied by Unesco (12) in 1975, about 94% of children aged from 6 to 11 attended school in the more developed regions of the world, as against only 62% in the less developed regions. This same study reveals that, in order to mainaint the present level of primary school attendance, the developed countries would only have to increase the numbers attending by 9% during the 'eriod 1975-2000, whereas the developing countries would have to increase those same figures by 73% over the last quarter of the century.

This population pressure will not only give rise to very acute financial problems for the developing countries but will also have an effect on the quality of education provided. If we look at the changes in the numerical relation between pupils and teachers, we shall see clearly that this coefficient is deteriorating

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(12) Trends and future outlook..Op. cit.

increasingly in the case of the poor countries (13). Incidentally, it is a known fact that classrooms are getting increasingly crowded in these countries.

Demands for the expansion and quantitative extension of educational systems leave little room for any real improvement of such systems. New educational media such as radio and television, which necessitate considerable initial investments and fairly extensive operating and maintenance costs, have not yet provided an effective solution to this demographical constraint.

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(13)

Proportion of pupils to teachers	Group 1	Group 2	Group 3	Group 4	Group 5
First degree 1960	39	42	37	31	28
1970	42	43	37	36	24
Second degree 1960	19	21	15	17	18
1970	21	25	19	15	16

Source: Table showing overall level indicators related to economic and educational development in 125 countries in 1960 and 1970, from the article by Christopher Colclough in the OECD publication (1978) op. cit.

An unpublished IIEP survey (Debeauvais and Kahn, 1980) on the long-term prospects of universal primary education in 98 developing countries (for which comparable data for 1977 were available) shows that a distrinction can be made between 5 groups of countries according to a gross school attendance index based on six years' schooling: we find 33 countries with a gross school attendance rate of over 100%, 22 with a rate of 84 to 99%, 19 at a level of between 59 and 83%, 11 at from 39 to 58% and finally 11 countries with less than 39%(14).

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(14) Among the developing countries not in the list, 16 have a revenue of less than 1075$ per capita. It may be assumed that the majority of them have comparatively low school attendance figures.

The breakdown of these countries by level of revenue is given in the following table:

BREAKDOWN OF GROSS SCHOOL ATTENDANCE RATES ACCORDING TO INCOME LEVELS IN 98 DEVELOPING COUNTRIES

Gross school attendance rates / income levels	+ 100%	84-99%	59-83%	39-58%	- 39%
- 265 $ less than 265$ per capita	2	2	10	7	9
265-520$	6	6	6	2	2
521-1075$	10	8	1	1	-
1076-2500$	8	4	1	-	-
more than 2500$	6	-	-	-	-
No information regarding revenues	1	2	1	1	-

On the basis of these figures, there is little hope that universal primary schooling can be attained everywhere by the end of the century. As regards secondary education, however, an increasing number of developing countries have already reached the satge

of generalised intermediate education (post-primary cycles of three or four years study). The problems now being encountered are those connected with the prolongation of universal svhool attendance for groups ill adapted to educational systems which were not designed for mass teaching.

2.4 DEVELOPMENTS AT SECONDARY AND ADVANCED LEVEL

The long-term trends in the "social demand" for educ education will probably be marked by a decrease in "drop-out" during schooling and an ever-increasing pressure exerted on the transition from one level of studies to another; this is reflected in the rates of increase in the secondary and advanced levels of education, which are much greater than in the case of elementary education, in spite of the priority given to the latter in the majority of countries. Many countries are undertaking reforms with the aim of preparing young people for their entry into working life at each level of secondary education and of advanced education courses of short duration. There has been almost universal difficulty about the application of these reforms either on account of their high cost or young people's attitude towards them, or because of the difficulties encountered on the labour market.

It must, therefore, be recognized that equal opportunity will be demanded not only at the level of basic education as was the case in the past, but also

at the highest levels. The least favoured strata of the population will increasingly demand education of quality equal to that provided to the privileged classes.

2.5 EVOLUTION OF THE TEACHING PROFESSION

Another prevelent trend, particularly noted in the developed countries, is the gradual ageing of the teaching profession as the result of a fall-off in teacher recruiting over a number of years - a movement which assumed outstanding proportions in the 50s and 60s. This situation could endanger constraints regarding the renewal and the methods perhaps the content of education. This same phenomenon has been noted in several developing countries, particularly as a result of the young generation's lukewarm attitude to teaching as a career. It was noted that, in one country, modern mathematics were abandoned after a few years on account of the resistence of the teaching staff to this type of innovation. On the whole, however, developing countries will continue to employ new masters, which makes certain authors think that these countries will, in the future, be more disposed to adopt educational innovations.

2.6 MIGRATION

As regards international migration, the 70s saw three important developments:

(a) a considerable movement of skilled manpower

towards the the petroleum-producing countries of the Third World;

(b) restrictions imposed by developed countries on the immigration of workers from less developed countries;

(c) a recent wave of migration from certain specific regions to other countries, including the developed countries, on account of political pressure.

The long-term trend may increasingly take the form of restrictions, on account of more widely applied protectionist policies. Meanwhile, the prolonged stay of immigrants who have settled for many years in a number of developed countries has given rise to the problem of languages and cultural identity for their children. Certain countries have already adopted measures to adapt the education provided for such children to the requirements of living both in their family and new national surroundings.

The population growth of the developed countries is showing an increasing tendency to level off. The result has been that the lowering of the population pressure has enabled these countries, for some years now, to extend considerably the duration of the compulsory education period. The gross rate secondary school attendance in 1975 was more than 68% for the developed regions. Meanwhile, several countries in the last-named regoins have recently attempted to prolong

compulsory education from five or six years to eight or nine years with the aim of fulfilling the aspirations of their population; this has not g failed to give rise to serious problems particularly in view of the incomplete primary school attendance and the relatively high rate of drop-outs.(15).

3. Constraints related to the social structure

3.1 Urbanization constraints

An examination of the population structure between 1960 and 1975 reveals that the urbanization problem is widespread both in developed and developing regions. In the case of 34 countries with low revenues, the urbain population has increased by an average of 8 to 13%, in other Third World countries by 32 to 43% and in developed countries by 66 to 76% over the same period (16) It may be expected that this trend will continue over the next two decades will all the multifarious consequences involved. It is known that the standard of urban schools, from the point of view of buildings, equipment and so son, is much superior to that of rural schools in many countries, and this cannot fail to have financial repercussions.

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(15) The table of overall indicators for 123 countries mentioned above shows a drop-out rate of over 57% at primary level in the poorest groups of countries and one of less than 10% in the richest groups.

(16) These figures are taken from the 1978 IIEP document, Population, Education and Employment, restropective analysis (Caillods, Debeauvais and Hallak)

It is also known that the shift of employment toward non-agricultural activities redulting from this changewill also have repercussions on the content of educational systems. The modern school is often criticised for not taking the requirements of rural communities in developing countries into account. the result of increasing ubbanization could well be an even greater negligence of the agriculture sector, although its development is essential for the survival of those same countries.

The very rapid rate of urbanization has created problems in many countries related to the marginalisation of a by no means neglible proportion of the population, particularly in the major urban centres. One of the social consequences of this development has been that difficulties experienced by young people in adapting themselves to their new environment have sometimes exploded in the form of revolt or juvenile delinquency. Special social measures at school are necessary for these marginal groups, and this demands a revision of curricula for which centralised educational systems do not always appear to be prepared. Out-of-school activities such as youth cnetres, in which education and training constitute an important part of cultural activities will also have to be considered.

Urbanization intensifies the mobility of the population, and this mobility creates further problems for the education system. Greater flexibility in the greater structure would appear to be necessary, not only to facilitate the movement of young people between rural and urban schools but also to ensure that adults are better adapted to their new environment.

Sociologists have often spoken of the impersonal, prosaic and even cynical and cold attitude with which human relations in the urban environment are imbued. The urban society is a world without warmth, harsh to the weak and the poor, and welcoming only to those who succeed in their struggle for money and power. On the other hand, present-day youth needs affectionate personal relationships and is seeking a world in which every person has his own value, where it is no longer the position of the individual in the hierarchy of economics and power which makes him worthy of esteem(17), a society "where ideas count for more than money". The educational system of tomorrow will not be able to remain indifferent to all these new aspirations.

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(17) Charles A.Reich - Greening of America, 1971. See also Inter-futures (Facing the Future), a recent OECD publication dealing with the irruption of post-materialist values among the young generation. (pp 103 and seq.)

It will have to pay more attention to the development of the individual, to imagination and creativity, to opening up the school to the community, to participation and to everything which humanizes relations between young people and adults and makes them more satisfying.(18)

3.2 CONSTRAINTS RELATED TO CULTURAL IDENTITY

Apart from the division of society into groups of young people and groups of adults, there is a tendency in many countries towards the division of ethnic, linguistic and religious groups (in other words, peripheral groups) which demand a greater liberty of action and autonomy.(19) This new constraint which can be observed both in the developed world and in the developing world, confronts educational systems with new problems such as that of teaching the languages of minorities in infant and primary schools and that of adapting the children from such groups to the pattern of the indigenous citizen. The educational structures should give greater proof of a capacity for adaption to the various requirements of these different groups and, at the same time, should respond more fully to the demands for equality which constitute a fundamental requirement of the present day.

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(18) See B.Schwartz: Education demain, 1973
G.Fragnière: L'éducation créatrice, 1975.

(19) In Inter-future there is talk of the requirements of liberty and taking root.

3.3 Family constraints

There can be no talk of social constraints without a mention of those exerted by the family. Now it is known that, through the effect of economic and urban changes, feminine emancipation and other changes taking place in modern society, the family is diminishing size, losing a considerable part of its functions and basing itself increasingly on relations of cooperation rather than domination. So far as the future of the family is concerned, opinion is much divided between the idea that the family nucleus is finished and that of the beginning of an era of consolidation of the family, in which the parent's abundant leisure time and the use of highly advanced technology such as mini-computers will enable the family to regain some of its functions, such as teaching (A.Toffler foresees a period during which the child would learn at home and play at school, which is more or less the opposite of what occurs now).

Without launching into a discussion about this, which would be likely to arouse bad feelings, we confine ourselves to noting the repercussions on the society of tomorrow of the increasing partinipation of women in the employment market combined with the gradual raising of their level of studies [20].

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(20) See Caillodd et al.: Population, education and employment (1978).

While it is true that in certain countries, the level of employment of women has depended on the general level of unemployment and under-employment, the tendency in the majority of countries has been an increase in the pressure exerted by women on the employment market, which might aggravate the prospects of widespread unemployment in the future. The fact of working outside the home accelerates and intensifies a woman's emancipation and this in turn modifies functions and relationships within the family. These changes cannot fail to influence the process of socialization of the children, while at the same time increasing the responsibility of the school(21) for a task incompletely carried out by the family.

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(21) The school should prepare both boys and girls for a new distribution of tasks between men and women within the family and train young people in achieving greater mastery over the "media", which play an increasingly important part in their education.

The transformation of relationships within the family makes necessary a considerable change in relations in the school, particularly between the teacher and the pupil. The relation of authority and submission to authority should gradually give way to reciprocal relations, with the master playing the part rather of a guide and counsellor rather than that of a superior laying down the law. A number of recent developments, including that of educational technology, act in favour of such a change.

4. ECONOMIC CONSTRAINTS

4.1 Probable trends

For some years the majority of futurologists have agreed that the world will enjoy only moderate economic growth over the next two decades, which will at times will tend towards zero. Such a general trend will not prevent countries from evolving differently(22) or the appearance of increasingly deep rifts between developing countries possessing extensive resources of energy (particularly oil) and those which have none.

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(22) For economic forecasts by country and region, see the works of Léontief (UNO), Lesbourne (Inter-futurs), Messarovic and Pestel (Rome Club), etc.

The authors of "Inter-Futures" forecast that the poorest of the people of the world (with revenues of about 300 $ or less) will number about 1,650 million.(23) in the year 2000 (i.e. 28% of world population[24]). Part of the Third World might in addition experience economic constraints, aggravated by increases in the price of energy, and foodstuff constraints, due to their inability to tackle the fairly costly programmes of irrigation and agricultural modernization. By the nature of things, there, these countries cannot abandon their traditional subsistence agriculture and must do everything to promote the rural sector, including the adaption of their systems of education and training to the demands of self-sufficiency in food.

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(23) This applies particularly to Southern Asia and Black Africa.

(24) According to a relatively slight variant of the population

Among the developing countries, which are going to undergo gradual diversification over the next twenty years, some have already undertaken a process of rapid industrialization. Such endeavours could achieve considerable success if the four following conditions were fulfilled:

(a) that markets open to their goods exist, particularly in the industrialized countries;

(b) that they can find some of their finance in rich countries;

(c) that they are capable of adapting imported technologie technologies to their economic and social conditions by means of an internal process of research and development;

(d) that there exists the necessary skilled labour force, the majority of whom can only be trained as a result of out-of-school vocational training superimposed on a sound basis of general education.

4.2 New international economic order

These countries, like all other developing countries, have pinned their faith to a new method of world-wide economic and trading relations in which solidarity takes the place of competition and justice replaces inequity and force. If the new international order were not to be fully achieved, there would be a risk of an increasingly heavy burden of military expenditure (at present running at over $400,000 million) which which would bear ever more heavily on the poor States

which are subject to threats from both outside and inside.

4.3 CONSEQUENCIES FOR EDUCATION

The poor countries will also be obliged to start looking now for new and less costly, and as far as possible more effective methods of education. This is rendered difficult by the fact that more than 80% of the cost of education is attributable to teachers' salaries.

It will also be essential to review the idea of quantitive expansion and extension of the schooling period which have characterized endeavours over previous decades and to pay more attention to the quality of the teaching provided.

5 EMPLOYMENT CONSTRAINTS

The economic crisis (considerable reduction of growth and even recession, inflation, widespread unemployment, monetary instability, etc.) from which the world is now suffering, may well continue for several years, though at different degrees of intensity according to region.

It cannot fail to have considerable effects on educational systems and on employment prospects for the school population which is increasing rapidly in nearly all countries. But unemployment, which is affecting both the developed and the developing world should not be attributed exclusively to the phenomenon

of recession. Another important factor lies in technological development, which has considerably reduced the capacity of various sectors of the economy, particularly agriculture and industry, to absorb manpower in those countries where a favourable attitude towards advanced technology has been adopted.

5.1 QUALITATIVE CHANGES

The fall in numbers engaged in agriculture is a universal phenomenon. The unemployed workers from rural areas and those newly arriving on the labour market must therefore seek jobs in industry, the services and trade. As regards the secondary sector (industry), after a first period of industrialization, its capacity for absorption is tending to fall, not only on account of technological progress and mechanization but also because of the rationalization of industrial undertakings. The fact that energy and certain raw materials are becoming scarcer and dearer could have an even more adverse effect on such capacity.

The transfer of labour to the tertiary sector (25) (trade and services) which seemed to be a solution

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(25) Hence the rapid growth of this sector, which employs between 50 and 65% of manpower in developed countries and a less, but nevertheless high, proportion of the working population in developing countries.

to the problems of labour surpluses in other sectors, is increasingly encountering not only the obstacle of increasingly rational managment and increasing mechanization (such as the introduction of computers into office work), but also the limitations imposed on the development of certain sub-sectors, such as the civil service, in many countries.

5.2 QUANTITATIVE ASPECTS

The retrospective IIEP survey on population, education and employment already quoted shows that the more developed a country is, the more salaried jobs there are. But it must be admitted that the increase in salaried jobs is much slower that the rate of economic growth. It is therefore not very likely that the annual increase in the labour force be absorbed by salaried jobs, and there is every reason to believe that, even in countries undergoing rapid industrialization, the informal sector will continue in the years to come to play a very important part in absorbing the working population in developing countries. Salaried jobs are to be found both in industry and in the services, but it is chiefly in the latter sector that an increasingly serious imbalance between offer and demand must be expected.

As regards the relation between education and unemployment, the conclusion the conclusion which may be drawn from an examination of many surveys on the subject is that the imbalance between the offer and

and demand of skills has rapidly increased. In spite of an increase in the real need for skills in many jobs, which is bound up with the higher technological level used, this imbalance should be attributed more to the raising of the educational standard of the population as a result of the extraordinary expansion of teaching at all levels, particularly secondary and advanced (26). The phenomenon of workers overskilled for their jobs is being increasingly noted, and it is the source of much fustration, particularly among young people.

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(26) Unesco shows that the rates of annual increase in numbers pursuing the various level of study during 1960-1970 were as follows :

	Primary	Secondary	Advanced
Developed countries	1,1%	3,4%	8,4%
Developing countries	5,4%	8,8%	10,1%

Moreover it must be recognized that, not only in blue-collar jobs but also in part of the tertiary sector and among office workers, technological improvements have sometimes been accompanied by the down-grading of the content of the jobs involved.

5.3 LINK BETWEEN EDUCATION AND WORK

After a few decades during which the value of diplomas as giving access to jobs was exaggerated, a relative fall in the value of diplomas relating only to cognitive achievements is becoming evident of the labour market, in favour of the use of intelligence tests, and aptitude and personality tests, together with criteria based on experience.

Will this state of affairs, and the increasing difficulty experienced by holders of diplomas in finding a job commensurable with their qualifications, discourage the demand for education? We do not think so. But there is nothing to prevent non-formal methods of education being increasingly used to fill the gap left by formal education. This implies that better coordination and articulation between the two systems will be absolutely essential.

In addition, it is highly probable that, over the next two decades, steps will be taken not only to introduce productive work more fully into the school curriculum and to organize working periods at the end of each syudy cycle, but also to facilitate

alternation between study and working life.

6. FINANCIAL CONSTRAINTS

6.1 Reduction in the rate of annual growth of the sums devoted to education.

After the fifties and sixties, during which education was given favoured treatment and an increasingly large share of public money was devoted to it - a period during which education was almost universally considered as the ideal means of ensuring equality of opportunity in society, of speeding up economic development and of increasing individual revenue, there has been for the past five or six years a reduction in the rate of growth of the sums devoted to education, while at the same time the school has been brought into question on both economic and socio-cultural grounds. Financial constraints are being felt in this sphere in many countries

The following table produced by the World Bank (IBRD 1974) is explicit regarding the first point I have just mentioned.

Rate of growth of sums devoted to education throughout the world: Source: IBRD 1974

Expenditure per inhabitant in $ US / Expenditure on education	Group 1 up to $ 120	Group 2 $ 121 to 250	Group 3 $ 251 to 750	Group 4 $ 751 to 1500	Group 5 over 1500
Public expenditure as % of budget:					
1960	6.7	20.0	15.3	6.1	12.9
1970	13.2	18.9	13.5	10.1	17.8
Expenditure as % of GNP					
1960	1.8	3.6	2.3	2.1	3.8
1970	2.9	3.8	3.0	3.1	5.8

As regards the second point, the study by J.C.Eicher and F.Orivel [27] shows clearly that the relation between the rate of annual growth of public expenditure on education and that of the GNP began to fall gradually in the 70s (except in two regions), as is shown by the following table:

Region	1965-70	1970-74
Africa	1,77	1,26
Arab States	1,49	1,07
Latin America	1,38	1,79
Asia	1,04	1,22
Developed countries	1,46	1;01
World	1,48	1,04

(27) Allocation of resources to education throughout the world, Unesco 1978, p.43.

In 1976 the rate of increase of public expenditure on education at world level was 3.5% (as against 10.9% in 1965), whereas the rate of increase of GNP during the same year was 2.4% (as against 5.2% in 1965). In other words, the reduction in the rate of growth is much greater for expenditure on education than for the GNP. It is true that the percentage of GNP allocated to education at world level had been constantly increasing between 1970 and 1976 (see following table), but there is every indication that there has been a trend towards stabilization of expenditure on education since the middle of the 70s.

Public expenditure on education as a percentage of GNP	1960	1965	1970	1974	1976
	3.7	4.9	5.3	5.6	5.7
In developing countries	2.35	3.07	3.52	3.43	3.99
In developed countries	3.99	5.14	5.54	5.95	6.00

Source: Eichert and Orivel (1979).

Ph Coombs, the author of "The World Education Crisis" (1968) is known to have been one of the first to draw the attention of educational specialists to the possibility of budgetary restrictions in the field of education. In a retrospective survey published recently (1979), this same author arrived at the conclusion that there is a decline in the priority

granted to education in certain countries and a rejection of the former attitude that increased expenditure on education was ipso facto a good investment in national development, and consequently there are increasing financial constraints on educational budgets(28). The result of this new situation was that projects for reforming educational systems, designed to ensure greater cost effectiveness and find new sources of financing them(e.g. by grouping local communities or introducing productive work as a means of financing the school) were started everywhere, particularly in the developing countries.

So far as these reforms are concerned, Ph.Coombs says that the majority of the educational "innovations" applied over the past ten years with the object of improving parts of the curricula and teaching methods and adding new technologies to old ones, have increased costs instead of reducing them. The real reduction of costs remains an important task for the future. We must face the truth that, if secondary and advanced education are to be developed over the next two decades even more rapidly than primary education, we must expect these constraints to be reinforced owing to the very high cost of these two levels of

(28) A reappraisal of the world education crisis, by Ph.Coombs, IIEP September 1979.

education[29].

4.3 THE LEAST DEVELOPED COUNTRIES

Foreign bilateral or multilateral aid will certainly not be able to solve the financial problems of the least developed countries. The latter received foreign aid in 1975 representing the equivalent of less than 10% of their expenditure on education, which can do nothing to solve their financial problem. The majority of these countries are faced through the nature of things (above all, owing to the rise in the price of energy) with a very serious lack of balance in their foreign payments, which has involved inflation and recession. All this does nothing to help solve the financial difficulties which have sometimes been aggravated by drought and substantial falls in agricultural production, which constitutes their main source of revenue.

It is scarcely astonishing to see that an increasing number of developing countries are trying to find ways of applying a policy of self-reliance within the context

(29) World Bank and Unesco data show that in Africa the cost of secondary education per pupil is six times more than that of primary education. The cost of university education is from 46 - 58 times as much. In Latin America and Asia too the comparative cost of secondary, and above all university, education is very high.

of an endogenous development project. New and less costly forms of education are being considered, and there is increasing talk of the necessity for providing part of the expenditure on education from the community or from the activities of the school itself.

The countries in question are thus faced with an exorbitant task over the next ten decades, if we consider the unprecedented increase in numbers at all levels, with which they will have to deal.

TOTAL NUMBERS OF PUPILS IN THE DIFFERENT REGIONS OF THE WORLD 1975-2000 (in millions)

Regions	Actual figures 1975	Forecasts for the year 2000	Net increase
World total	557	1005	448
Africa	53	164	111
Asia	320	452	132
Latin America	73	167	93
Europe and USSR	104	163	59
North America	63	70	7
Oceania	5	7	2

Source : International council for educational development, quoted by M. Debeauvais, January 1975.

The financial constraints are particularly serious in that the cost per pupil has increased considerably in all countries as a result of various factors.

including the rise in teachers' salaries - a factor against which it is difficult to take any action.

7. POLITICAL CONSIDERATIONS

7.1 The researchers' point of view.

The recent OECD study "Inter-futures (facing the future" (1979) forecasts a few major changes in the political field, including:

(a) a reduction in government ability to master increasingly complex situations;

(b) an increase in government endeavours to overcome the various "rigidities" of which they are at present victims.

One of the factors in this increasing complexity of social situations is that very trend towards division of which we have already spoken. Governments appear to be increasingly prone to adopt attitudes favouring "pluralism" and to relax structures so as to enable the various elements of the population to participate

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(30) Even an optimist such as H. Kahn (and his colleague Wiener) who speaks in terms of an era of political stability is well aware of the potential dangers of islands of wealth in a sea of poverty (1967).

more fully in the process of taking important decisions[11].

Alvin Toffler, in his recent book: "The Third Wave", foresees the society of tomorrow as being politically based on the three following principles:

(1) the power of minorities;

(2) semi-direct democracy

(3) division of decision; i.e. the transfer and delegation of the power of decision to the most suitable level (national, regional or local).

Using a different language, the author of the famous "Shock of the Future" speaks in the same tendency as the notions of "Intra-future".

The older work of the European Cultural Foundation: "Europe 2000" (1977) forecasts a number of socio-political developments over the next two decades:

(1) a trend towards the "polarisation" of Western societies as a result of the marginalisation of certain groups (such as immigrant workers, young unemployed graduates, etc.) and a possible revolt of these groups against the rest of the population.

(2) the intensification of Third World nationalist movements which might even involve acts of terrorism and sabotage within the territory of industrialised countries.

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(11) Dr. Hermann Kahn, futurologist, has taken a less optimistic view. He says that, faced with the widespread fear

p.343

(...) the accentuation of competition and conflict at world scale over raw materials, particularly sources of energy.

As far as the developing countries are concerned, the forecast are somewhat grim. The danger of totalitarianism or anarchy of which Deliberation (1974) wrote could become a reality, particularly in these countries. The new international order has, however, struck a few sparks of hope for this part of the world. Under such an order, the dependence of the Third World on the developed world must gradually give way to interdependence and cooperation. Since it is not conceivable that today's poor will live in the same way as the opulent minority does at present it will be necessary to take appropriate steps to share

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(...cont.) instability and insecurity of the world of today and tomorrow, socio-political systems will tend to become more rigid. "For education, that would mean a return to more authoritarian systems of teaching and, in a general way, a return to more rigid structures". We do not share this opinion, for we consider that centrifugal forces are continually increasing in strength over centripetal forces.

the wealth more equitably. Tinbergeb is tight in saying that, to do this, a fresh distribution of power between the rich and the poor countries is essential.

7.2 The Implications for the content of education.

What may be the implications of such political changes on the content of the education system? It is possible to foresee at least three:

(a) a better preparation of young people for change in general (A. Toffler spoke of the Committee for anticipative democracy and R. Jungk invited the public to the "workshops for the exploration and construction of the future".

(b) endeavours by the school to make young people more aware of political questions and develope their sense of responsibility; this would necessitate making the school more open to the community and vice versa.

(c) a more far-reaching review of school curricula, attaching more importance to interdependence and cooperation among nations (32).

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(32) For recent works on education with the aim of promoting interpendence, peace and the New International Order, see, inter alia:

W.J.Platt - Educational reform policies for interdependence, 1977 (Seminar paper).

Laszlo et al - Goals for Mankind (Rome Club) 1977.

Haavelsrud (Editor) - Education for peace, reflection and action, England 1976) cont; p.52

It should not be thought that there is an inherent contradiction between increasing human solidarity and the desire for cultural identity of which I have already spoken. Without a better assertion of indivuality, real cooperation is difficult to achieve, just as it is difficult to achieve the evolution of a society without the cooperation of others.

Observing young people today, we realise that the promise of a higher standard of material well-being reflected in increased consumption can no longer constitute the basic policy of governments. It is therefore time, in the next few decades, to concentrate more, in both school and out-of-school education, on aesthetic, moral and spiritual values(33) and thus create more balance in a world dominated by the uncontrolled power of a technological society.

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(33) See the recent report of Unesco's regional workshop in Asia (January 1980) on the aims and theories of education in Asia.

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(32) cont.
Tinbergen et al. - Reshaping the international order, New York, 1976.
Unesco: Moving towards change some thoughts on the New International Economic Order, 1976.
The work Inter-future recalls that young people's knowledge of other cultures and the new aspects of economic and social phenomena should be improved.

8 - ADMINISTRATIVE CONSTRAINTS

Max Weber rightly forecast an expansion of bureaucracy in all sectors of human life. Bureaucracy implies a rational approach to the management of affairs, a tendency to standardise procedures and the distribution of power according to a chain of command.

The tendency towards bureaucratization which has been characteristic of the development of education systems in many countries, and to which mass education movements have given additional impetus, has already given to serious problems, not the least of which is the increasing estrangement between school and community.

One of the school's major problems at present is that it leads a life increasingly separate and isolated from other educational institutions (such as the family, the media, the religious organisations, etc.) In addition, it is isolated from the economy (labour market) and the other non-educational institutions of society.

In countries with a centralised system for the administration of schools, the undertaking has become so vast that effective control of it has become practically impossible. The result has been an increasing distribution of tasks both horizontally and vertically. Horizontally, education has been has been deformalised and the new methods of

teaching have been entrusted to various public and private institutions; vertically, there has been administrative decentralisation of the persons and groups concerned, particularly at a local level.

But the solution to "over-bureaucratization"(34) is not to be found at ministry of education level. Important changes must be introduced into the relationship between teacher and pupil within the school itself (dialogue relationship in place of domination/submission relationship, team work for teachers, group activities for pupils and so on) In addition, the educational structures must become less rigid in the future and yield place to the individual self-training projects which many authors consider to be the chief characteristic of the education of tomorrow(35). In my opinion, Ch. Hummel is right in believing that indivualized education is not necessarily in opposition to the principle of equality which is being increasingly emphasised. "Equality no longer means "the same education for all" but "the best education for everyone!"(36)

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(34) See T.Husen, "The School in Question", 1979

(36) See Fragnière and Schwartz

(36) Op. cit., p.188

As regards the content of education, participative decentralisation should normally result in the adaption of such content to the conditions if each locality (or region) and to the aspirations of the population (represented in one way or another in the school management or educational affairs councils). S Such adaption obviously gives rise to the problem of coordination with requirements and priorities at national level, a problem to which an appropriate solution will have to be found.

9. INSTITUTIONAL CONSTRAINTS

One of the most important developments which has taken place over the past decade has been a challenge to the existence of the school as such(37) and a

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(37) See, inter alia, T.Husen, op. cit. This challenge has taken various forms: some have cast doubts on the value of the school as a means of equalizing opportunity (Bowles and Lintis, H.Levin and M.Carnoy). Others have expressed doubts about the effect of school education on increases in worker productivity (Berg). A number have expressed doubts about the impact of education on development (T.Hanh and colleagues even go so far as to say that scholastic education has been an obstacle to the real development of asia and Africa). Jencks and his colleagues have challenged the idea that equality of opportunity at school would result

cont.p.56

It must be admitted that this distribution of responsibilities has not always been prejudicial to the school. School teaching has gained much from the experience of certain methods and pedagogical approaches applied in the extra-scholastic sphere, particularly in adult education.

So far as mass communications are concerned, formal teaching has attempted to answer the challenge by using the same means for its own purposes (educational media).

At the beginning of the 70s, the enthusiasm for new forms of education was such that there was even talk of the approaching "de-scholarization" of society (Illich, Reimer and others). A decade later it is still apparent that the significance of non-formal as opposed to scholastic education is comparatively negligible in most of the world and that, as admitted even by those in favour of life-long education (which benefits from both the formal and non-formal and even the informal systems, this has not been fully achieved in any educational system.

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(37) cont.
equal earnings on the labour market. Collins and many others have shown that the competences and skills acquired at school (mainly of a cognitive nature) are not necessarily those which the labour market requires and that, consequently, the school is merely an instrument for sorting candidates for work.

there are many reasons for this delayed development, including the fierce resistance of teachers and their unions to anything which diminishes the prestige and power of the school. It appears that, in the years to come, increasing emphasis will be placed on a common core of basic teaching, lasting longer than in the past, with various sorts of non-formal education, mainly of a vocational training type and conforming to the requirements of each individual or group of individuals. The development of science and technology, which I shall refer to later, will take place at such a speed that vocational qualifications will therefore no longer be able to attempt to transfer a specific stock of knowledge or know-how. It will be content with a general education of individuals, imparting to them the capability of adapting themselves to a continually changing world, and will leave to non-formaleeducation the task of training the individual for a particular job. The tendency to change jobs, which is increasingly prevalent among young people, and the obsolescence of professional qualifications as the result of technological progress and rational management are so far-reaching that only non-formal education (16) almost made to measure

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(16) The introductory document to the Seminar and the bibliography distributed to participants give a detailed list of Unesco publications on this question and on life-long education.

will be able to adapt itself to the problem.

CONCLUSIONS

The foregoing remarks lead me to formulate a few proposals regarding conditions for the future. These views will inevitably incorporate a subjective, i individual aspect, owing to the very fact that any view of future activities is based on assessment of values.

1. I have said that during the 70s, the gulf between education and the other institutions of society became wider and older. It would be as well if the 80s and 90s could provide prospects of reconciliation between the school and other educational institutions (family, media, non-formal educational institutions, etc.), between the school and the economy, between the school and the world of politics, and between the school and the life of the community.

2. The school is less in a position than ever to ignore the constraints(demographical, physical, economic etc.) exerted in society; it must therefore undertake the reform of contents, methods and structures which will enable it to adapt itself to the new situations that arise.

3. Educational programmes can no longer be based on assumptions of rapid economic growth and the inexhaustible abundance of energy, raw materials

and other natural resources. Education must therefore endeavour to transform the consumer mentality into one of the conservation of irreplaceable resources and productivist ideologies into ecological. Unemployment is like to spread; although it is not the direct responsibility of the educational systems, the latter should endeavour to promote the initiation of all pupils in various productive tasks[39], and stimulate a spirit of initiative and enterprise directed towards self-employment, while at the same time preparing young people for a life in which culture and leisure pursuits will occupy an increasingly large part, just as formerly the majority of the individual's time was devoted to the job.

4. Unlike the population of industrialized countries, those of the developing countries are still a long way from the stationary phase, since new financial resources have to be found in order to confront the overwhelming task they have taken on - the universalization of primary education at the same time as democratization. They also have to make further

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(39) Even in a consumer society productive work renders enormous service by preparing the individual for "production for his own consumption", and such production will have an important core place in the economy of tomorrow.

efforts to strike a balance between the quantitive expansion and qualitative improvement of their educational system.

In view of the population pressure, three types of action are possible in the field of education.

(a) changing the educational structure; e.g. by providing educational facilities for all ages outside the formal education system (non-formal and informal education, life-long education, iterative education and self-training);

(b) effecting economies in the present system, ensuring cost-effectiveness and mobilization new sources of finance;

(c) modifying the content of education by emphasizing, in accordance with the Bucharest conference the necessity of making young people aware of population problems and questions of family planning which, obviously, can have only long-term effects.

1. One of the major problems in the field of demography is, as we have seen, increasing urbanization, particularly in the developing countries - a movement which may result in a destructive negligence of agriculture, which is so vital to the economy of the countries concerned. Some countries have reintroduced rural and agricultural subjects into the curricula of urban schools in order to counteract such an urban and extensive tendency (e.g. Chile). Some have "ruralized" the teaching provided in rural

districts so as to adapt peasant's children more closely to their environment and stem the desire to run to the towns; the effect of this has sometimes been to reinforce the anti-democratic hierarchy of the societies in question.

In speaking of town, I have also alluded to some of the disadvantages of town life. I have said that the out school has an important part to play in promoting affectionate relationships between persons and in ensuring the harmonious development of the individual personality. In order to counter the adverse effects of a monotonous, mechanical, impersonal life, education will have to place more emphasis on individual originality, imagination, and group creativity as well as on the moral and spiritual values of the collectivity.

6. Education will not be able to turn its back on that new reality of the contemporary world which Mr. Trifler calls "the power of the minorities". Education must further accentuate the value of tolerance towards the many trends in each society and the art of living and cooperating with groups which are increasingly "dissident".

7. The forecasts concerning the political structure of the world of tomorrow vary from extreme pessimism to extreme optimism. For some there will be universal totalitarianism, for the others a universal tolerant

pseudo-direct democracy or literal socialism. What can be concluded from all these points of view on the increasing importance of what we might call political maturity - the capacity of ordinary citizens to participate in the decision-making process, for what increases the chances of domination by totalitarian governments is the lack of that very capacity among the governed. The school, as a result of its structure and content, its curricula and methods, could be held to develop such capacity for real, active and responsible participation in public life by all. The school, in my opinion, has not only the task of reproducing an existing social system, it should prepare the ground for a better social order. In this connection, the intensification of activities to ensure equality of opportunity in education is one of the first measures to be taken.

I cannot leave the subject of constraints exerted on the social world and the educational system without a reference to the most important constituent part of modern culture - scientific and technological knowledge. As we know, the speed of scientific and technological progress is such that it often exceeds the ability of the educational system to adapt itself. Consequently, education systems are now faced with the choice between basic education and the attainment of an intellectual ability which rather

the methods statistic for the former would be unable to produce. In any case, it is to be known that the transfer of science and technology from the most developed countries to the less developed ones is an inadequate, in spite of all international and bilateral endeavours, and that the human and financial resources for basic and even applied in the latter countries is so insufficient that the majority of the Third World is still living under the domination of the scientifically and technologically advanced countries.

5. The education planners of tomorrow must not fail to pay the necessary attention to looking for solutions to these two sets of problems. Reinforcing the scientific and technological elements of teaching at all levels is essential. Thought must also be given to the continuous training of teachers in scientific and technical subjects. The educational system particularly at higher levels, should take a more active part in research. The training of researchers should be ensured by a special institution, particularly in the universities. Developing countries will have to formulate their scientific and technological policies more systematically and devote more resources to research, particularly in the fields for which they

have a "competitive advantage", and collaborate to a greater extent than in the past with other countries in the same continent. In this field, as elsewhere, the cultivated population will have to be informed, trained and given more influence in the politics of modern science and technology.

In matters how important science may be in the world of today, we should never lose sight of the necessity for a balance between the development of science and that of culture in the widest sense of the word.

TABLEAUX ANNEXES

Document présenté par

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(Annex I)

ANNEX I

POPULATION GROWTH AT THE WORLD LEVEL AND BY REGIONS

AREA	ESTIMATED POPULATION BY 1975 (in millions)	PROJECTED POPULATION BY 2000 (median in millions)	ANNUAL GROWTH RATE ESTIMATED 1950-1975 %	ANNUAL PROJECTED GROWTH RATE (median %) 1975-2000
World	3940	6,114	1,8	1,8
More developed regions	1131	1360	1,1	0,7
Less developed regions	2809	4754	2,2	2,2
By area:				
Africa	401	818	2,4	2,8
Latin America	326	620	2,7	2,6
Southern Africa	237	394	1,4	0,9
East Asia	1000	1370	1,6	1,2
South Asia	1750	2267	2,4	2,4
Europe	471	540	0,8	0,5
Oceania	23	33	2,1	1,7
USSR	251	317	1,4	0,8

Source : United Nations: World population prospects as assessed in 1973.

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TABLE II

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
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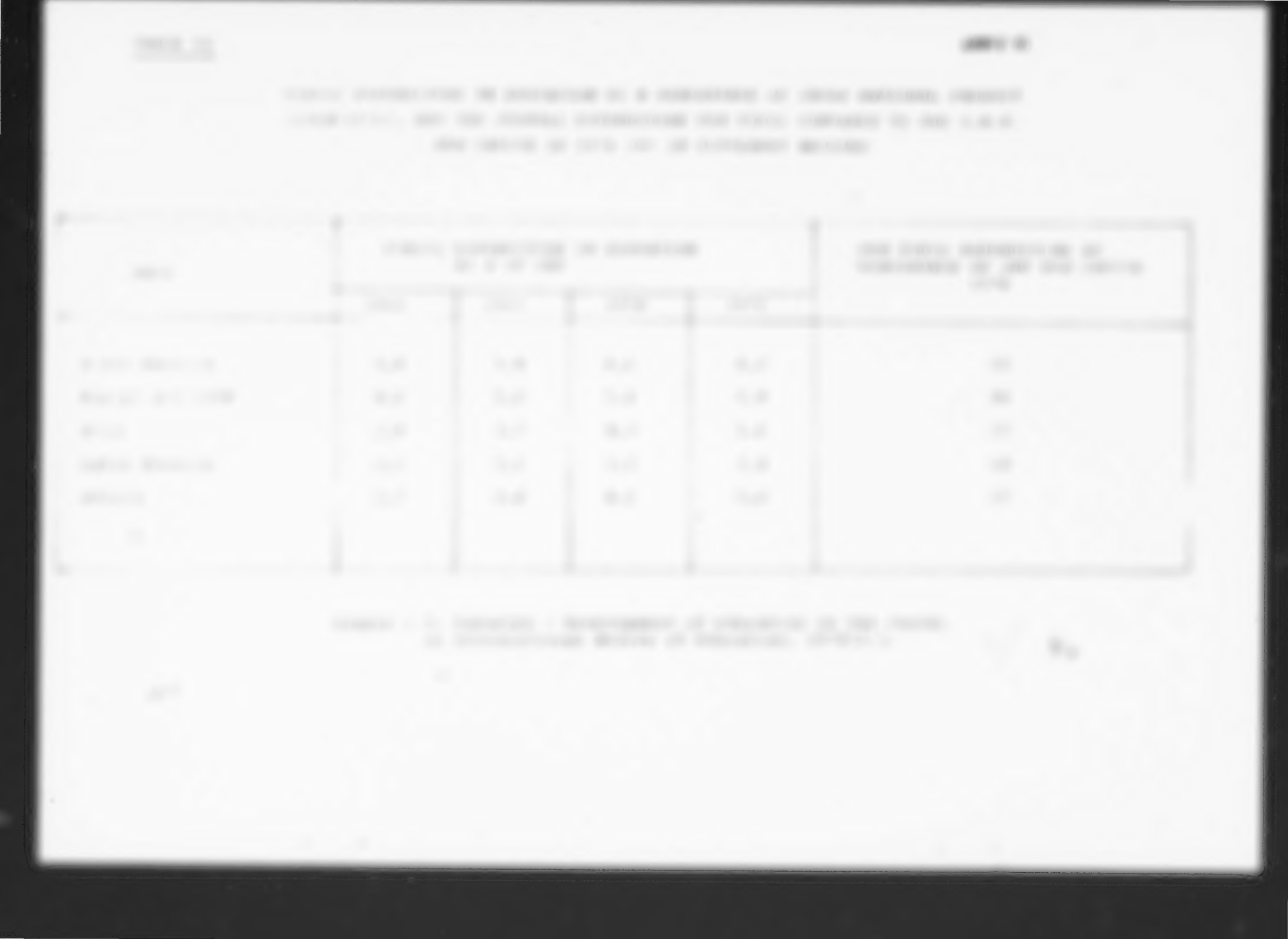

ANNEX VII

PERCENTAGE OF UNEMPLOYED IN THE LABOUR FORCE, IN 1970 - 1976 and 1977
IN SOME DEVELOPED COUNTRIES (VARIOUS LABOUR FORCE SAMPLE SURVEYS)

COUNTRIES	1970	1976	1977
Australia	1.8	3.3	5.7
Belgium	2.1	4.8	5.8
Canada	5.9	7.1	8.1
Ireland	7.4	7.9	11.6
Italy	3.7	3.9	7.2
Japan	1.2	2.0	2.0
Sweden	1.5	2.0	2.0
United States	4.9	7.8	7.0

Source : United Nations 1978 Statistical Year Book.

TABLE VIII

ANNEX VIII

EXTERNAL PUBLIC DEBT, OUTSTANDING AND DISBURSED AS PERCENTAGE OF G.N.P.
1970 - 1977

	1970	1977
Low income countries	10,7	17,8
Middle income countries	18,7	18,8

Source : World Bank - World Development Report, August 1979.

[illegible]

[illegible]

[illegible]	[illegible]		[illegible]
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